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CIS Congressional Information Service
Washington, D.C.

Calendar No. 210

101ST CONGRESS
1st Session

SENATE

REPORT
101-110

CAVE RESEARCH INSTITUTE ACT OF 1989

AUGUST 30, 1989.—Ordered to be printed

Filed under authority of the order of the Senate of August 2 (legislative day, January 3), 1989

Mr. JOHNSTON, from the Committee on Energy and Natural Resources, submitted the following

REPORT

[To accompany S. 855]

The Committee on Energy and Natural Resources, to which was referred the bill (S. 855) to direct the Secretary of the Interior to establish a cave research institute at Carlsbad Caverns National Park, having considered the same, reports favorably thereon with an amendment and an amendment to the title and recommends that the bill, as amended, do pass.

The amendments are as follows:

1. Strike all after the enacting clause, and insert in lieu thereof the following:

SECTION 1. SHORT TITLE.

This Act may be cited as the "Cave Research Institute Act of 1989".

SEC. 2. FINDINGS.

The Congress makes the following findings:

(a) The world's most exposed fossil reef, Capitan Reef, in southern New Mexico that includes Carlsbad Caverns, contains over 300 caves, including 75 indentified caves in Carlsbad Caverns National Park and 22 caves in Guadalupe Mountains National Park;

(b) Recent explorations of Lechuguilla Cave at Carlsbad Caverns National Park have provided much new information about the wonders of this cave including the fact that it is the second deepest cave in the United States and contains outstanding world-class cave features such as gypsum crystal chandeliers and gypsum flowers;

(c) The Lechuguilla Cave has been described by cave researchers as possibly the finest cave in America;

(d) The interest and excitement of cave researchers throughout the world have been focused on Carlsbad Caverns National Park;

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(e) Cave researchers could use this research institute as an operational base for study of caves in other regions and as a focal point for storage of data on cave geology and speleology; and

(f) The Congress, with the passage of Public Law 100–691, the Federal Cave Resources Protection Act of 1988, recognized the significance of cave resources on Federal lands and established the policy that Federal lands be managed in a manner which protects and maintains, to the extent practicable, significant cave resources.

SEC. 3. AUTHORIZATION

(a) In order to provide for needed research relating to cave resources on certain lands in the United States, the Secretary of the Interior, acting through the Director of the National Park Service shall establish and administer the Cave Research Institute (hereinafter referred to as the "Institute"). The Institute shall function as a center for the orderly and scholarly collection, analysis, and dissemination of research material related to caves in Carlsbad Caverns National Park, the Capitan Reef area, and other lands managed by the National Park Service.

(b) The Institute shall produce educational and interpretive materials vital to public understanding of cave geology, assist students and researchers as an educational laboratory, and provide for a comprehensive evaluation of cave resources, protection needs, and interpretive information.

(c) Research at the Institute shall be directed primarily towards lands managed by the National Park Service, but the Secretary of the Interior may enter into cooperative agreements with other agencies or entities as may be appropriate to carry out the purpose of this Act.

SEC. 4. RESEARCH INSTITUTE OPERATIONAL PLAN.

Not later than one year after the date that funds are made available under this Act, the Secretary of the Interior shall prepare and transmit to Congress an operational plan for the Institute to include—

(a) a research plan, staffing needs for the first five years of operations, proposed cooperative agreements with other agencies and institutions pursuant with existing authorities, and facility needs; and

(b) an analysis of operational costs including staffing for five years, cost of facilities, and other appropriate items.

SEC. 5. AUTHORIZATION APPROPRIATION.

There are authorized to be appropriated such sums as may be necessary to carry out the provisions of this Act.

Amend the title so as to read:

An Act to direct the Secretary of the Interior to establish a Cave Research Institute.

PURPOSE OF THE MEASURE

The purpose of S. 855, as ordered reported, is to direct the Secretary of the Interior to establish and administer a Cave Research Institute to function as a center for the collection, analysis, and dissemination of research material related to caves in Carlsbad Caverns National Park, the Capitan Reef area and other lands administered by the National Park Service.

BACKGROUND AND NEED

Recent explorations of Lechuguilla Cave at Carlsbad Caverns National Park in New Mexico have aroused a great deal of interest by speleologists and the public at large. The extent and depth of this cave, interesting speleological formations, and its unique morphology have led scientists to rate it as one of the finest caves in the world. Speleologists believe that the cave not only offers the opportunity for unparalleled cave research but also for broad scientific research and discovery.

Understanding delicate cave ecology can provide a baseline for understanding more complex ecosystems on the surface. For example, the study of bats has provided information that has been applied to research on sonar, artificial insemination, aging and other fields. Extensive systems, like Lechuguilla Cave, afford the geologist an opportunity to examine the interior of the Capitan Reef geological formations, yielding additional data to supplement the study of cores, drill cuttings, or other geophysical means of studing geology. The caves of the Guadalupe Mountains are yielding new clues to help the petroleum industry better understand porosity development. Caves also provide a secluded environment for the study of effects of long-term isolation on humans, knowledge that can be useful to our astronauts in space.

While cave research is ongoing at Lechuguilla and other important caves, and public interest in speleology has been increasing, the United States is still without a central facility for the collection, analysis and dissemination of cave research. Other nations, such as France, Yugoslavia and the People's Republic of China have already recognized the importance of coordinating cave research and have established government-sanctioned cave research facilities.

SUMMARY OF THE MEASURE

S. 855 would direct the Secretary of the Interior, acting through the Director of the National Park Service to establish and administer the Cave Research Institute. The Institute will function as a center for the collection, analysis and dissemination of research material related to caves in Carlsbad Caverns National Park, the Capitan Reef area and other lands managed by the National Park Service. It is the intention of the Committee that the Cave Research Institute be administered by the National Park Service's Southwestern Region with initial research focused on such resources as Lechuguilla Cave, while retaining the opportunity for a wider scope of research.

The Institute will also produce educational and interpretative materials for the public, assist students and researchers as an educational laboratory and provide for evaluation of cave resources, their protection needs, and interpretative information.

While research at the Institute shall be directed primarily towards lands managed by the National Park Service, the Secretary of the Interior may enter into cooperative agreements with other agencies or entities as may be appropriate.

The Secretary shall prepare and transmit to Congress an operation plan for the Institute, not later than 1 year after the date that funds are made available. Such plan will include a research plan, staffing needs for the first 5 years of operations, proposed cooperative agreements with other agencies and institutions, facility needs, and an analysis of operational costs.

LEGISLATIVE HISTORY

S. 855 was introduced by Senators Bingaman and Domenici on April 19, 1989. The Subcommittee on Public Lands, National Parks and Forests conducted a hearing on S. 855 on June 21, 1989.

At the business meeting on August 2, 1989, the Senate Committee on Energy and Natural Resources ordered S. 855, as amended, favorably reported.

COMMITTEE RECOMMENDATIONS AND TABULATION OF VOTES

The Senate Committee on Energy and Natural Resources, in open business session on August 2, 1989, by unanimous vote of a quorum present, recommends that the Senate pass S. 855 if amended, as described herein.

The rollcall vote on reporting the measure was 19 yeas, 0 nays, as follows:

YEAS	NAYS
Mr. Johnston	
Mr. Bumpers	
Mr. Ford	
Mr. Metzenbaum*	
Mr. Bradley	
Mr. Bingaman*	
Mr. Wirth	
Mr. Conrad	
Mr. Heflin	
Mr. Rockefeller	
Mr. McClure	
Mr. Hatfield	
Mr. Domenici	
Mr. Wallop	
Mr. Murkowski	
Mr. Nickles	
Mr. Burns	
Mr. Garn	
Mr. McConnell*	

* Indicates voted by proxy.

COMMITTEE AMENDMENTS

During the consideration of S. 855, the Committee adopted an amendment in the nature of a substitute, and an amendment to the title to reflect the changes in the substitute.

While the original text of the bill directed that the Cave Research Institute be a unit of Carlsbad Caverns National Park, the substitute directs the Secretary to establish the Institute, but does not statutorily designate where the Cave Research Institute would be located or that it be a unit of the National Park Service or any particular park. As stated above, however, it is the intention of the Committee that the Cave Research Institute be administered by the National Park Service's Southwestern Region.

The substitute also clarifies that the Institute be a center for the collection, analysis and dissemination of research material on caves in Carlsbad Caverns National Park, and on other lands managed by the National Park Service. The bill as introduced directed the Institute to provide for cave research on other Federal lands as well as Park Service lands. The substitute provides for research at the Institute to be directed primarily towards lands managed by

the National Park Service, but allows the Secretary of the Interior to enter into cooperative agreements with other agencies or entities as appropriate.

COST AND BUDGETARY CONSIDERATIONS

The Congressional Budget Office estimate of the costs of this measure has been requested but was not received at the time the report was filed. When the report is available, the Chairman will request it to be printed in the Congressional Record for the advice of the Senate.

REGULATORY IMPACT EVALUATION

In compliance with paragraph 11(b) of Rule XXVI of the Standing Rules of the Senate, the Committee makes the following evaluation of the regulatory impact which would be incurred in carrying out S. 855. The bill is not a regulatory measure in the sense of imposing Government-established standards or significant economic responsibilities on private individuals and businesses.

No personal information would be collected in administering the program. Therefore, there would be no impact of personal privacy.

Little, if any, additional paperwork would result from the enactment of S. 855, as reported.

EXECUTIVE COMMUNICATIONS

On June 7, 1989, the Committee on Energy and Natural Resources requested legislative reports from the Department of the Interior and the Office of Management and Budget setting forth executive views on S. 855. These reports had not been received at the time the report on S. 855 was filed. When the reports become available, the chairman will request that they be printed in the Congressional Record for the advice of the Senate. The testimony provided by the appropriate agency at the Subcommittee hearing follows:

> STATEMENT OF GERALD D. PATTEN, ASSOCIATE DIRECTOR, PLANNING AND DEVELOPMENT, NATIONAL PARK SERVICE, DEPARTMENT OF THE INTERIOR, BEFORE THE SUBCOMMITTEE ON PUBLIC LANDS, NATIONAL PARKS AND FORESTS, OF THE SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES, CONCERNING S. 558, A BILL TO STUDY PROTECTION AND INTERPRETATION OF LECHUGUILLA CAVE AT CARLSBAD CAVERNS NATIONAL PARK, AND S. 855, A BILL TO ESTABLISH A CAVE RESEARCH INSTITUTE AT CARLSBAD CAVERNS NATIONAL PARK
>
> Mr. Chairman, I appreciate this opportunity to provide your Subcommittee with testimony on S. 558, a bill to study protection and interpretation of Lechuguilla Cave at Carlsbad Caverns National Park, and on S. 855, a bill to study, and establish, a cave research institute at Carlsbad Caverns National Park.
>
> Mr. Chairman, the study proposed in S. 558 requires no additional authority, and will be completed as funding becomes available. The National Park Service would not

object if Congress chooses to enact a specific authorization for this study; however, we do not intend to request additional funding. We estimate the cost of the study proposed in S. 558 to be $100,000.

Mr. Chairman, we oppose enactment of S. 855. Conducting cave research on nonpark resources and creating a large scale repository of scientific data on cave geology and speology are not appropriate Park Service functions and would not be a high priority for the use of Park Service funds. There is already authority under existing law for Park Service staff to conduct such in-park research as may be necessary to protect cave resources managed by the National Park Service.

Although the existence of Lechuguilla Cave has been known for many years, only during the past 4 years have National Park Service staff, cave explorers, and researchers progressively become aware of the wonders and size of the cave. We now know that the cave contains a wide variety of speleothems, including the largest known collection of hydromagnesite ballons in the park, and the cave is one of 4 caves in the United States and one of very few in the world to have these rare features. Lechuguilla appears to have the best display of gypsum speleothems in the world and includes such features as gypsum flowers, crusts, cave cotton, strands, needles, thick gypsum beds and large crystals oriented to wind directions.

Lechuguilla Cave is the longest deep cave known in the United States and is the second deepest cave in the United States. At over 36 miles, it is the 7th longest cave in the United States.

Lechuguilla Cave offers the opportunity for broad scientific research and discovery. The speleogenesis of Lechuguilla Cave and others in the Guadalupe escarpment are very unusual because of the unique morphology of the cave—they don't fit the form and pattern of previously studied caves in more humid regions of North America. Cave temperatures, air movements, and passage development by the presence of water in the cave present an opportunity to study an exotic resource where the cave formation process is actually ongoing.

National Park Service staff and researchers have equated the evolving data on the cave with the discovery of a whole new park previously not known to exist. Extensive new speleogenesic data may result for deep cave research.

Carlsbad Caverns National Park is situated in Eddy County in southeastern New Mexico and extends 21 miles along the Guadalupe Ridge/Escarpment. The park contains a segment of a Permian barrier reef, one of the world's largest fossil reefs, within which has developed an extensive cavern system with countless magnificent and curious formations. Over 300 caves are known to exist in the reef including 75 identified in Carlsbad Caverns National Park and 22 caves in hearby Guadalupe Mountains National Park. The park was established to preserve and make

available to the public some of the world's largest and most beautiful limestone caverns. Carlsbad Cavern is the largest of the parks known caves and is profusely decorated with speleothems.

Cave resources of the Carlsbad area offer outstanding educational, interpretive, and research opportunities and support a major tourism economy for the area. In 1988, over 786,000 people visited Carlsbad Caverns and more than 500,000 went through the main cavern.

The magnitude of cave resource and multiple research opportunities makes Carlsbad Caverns National Park an excellent location for a cave research institute. The park staff are in the forefront of current cave research and cave researchers view the Captain Reef area as an outstanding area for learning about cave geology and how caves form. There is evidence that additional research in Lechuguilla Cave may reveal unknown information about how caves are formed and this cave offers a rare opportunity to study cave speleogenesis.

Mr. Chairman, this concludes my prepared comments. I will be pleased to answer any questions you may have.

CHANGES IN EXISTING LAW

In compliance with paragraph 12 of Rule XXVI of the Standing Rules of the Senate, the Committee notes that no changes in existing law are made by the bill S. 855, as reported.

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